

THE EFFECT OF PREVIOUS BREASTFEEDING ON THE BIRTH WEIGHT OF SUBSEQUENT CHILDREN

Merete Eggesbø, *NIPH, Norway*

Leda Chatzi, *University of Crete, Greece*

Monica Guxens, *CREAL, Spain*

Maria Vassilaki, *University of Crete, Greece*

Theano Roumeliotaki, *University of Crete, Greece*

Jordi Sunyer, *CREAL, Spain*

Manolis Kogevinas, *CREAL, Spain*

Background and Aims: Studies have shown that birth weight increases with parity, while breastfeeding lowers the maternal body burden of persistent environmental toxicants. We hypothesized that women with longer history of previous breastfeeding have a reduced risk of adverse birth outcomes in subsequent pregnancies due to the decreased exposure of the fetus to such toxicants.

Methods: We restricted our analysis to second gravida women with singleton births from the “Norwegian Human Milk Study” (HUMIS, n=806 mother-newborn pairs), the Spanish multi-center “INMA” study (n=737), and the Greek “Rhea” cohort (n=404). Breastfeeding duration in previous pregnancy (in months) was assessed by a questionnaire, and data on birth outcomes; birth weight, small for gestational age, large for gestation age, difference in birth weight between index and previous pregnancy, were obtained from the women’s clinical records and questionnaires. Multivariable log-binomial and linear regression models were used, adjusting for several potential confounders.

Results: Breastfeeding duration in previous pregnancy is associated with a slightly reduced risk for small for gestational age neonates in index pregnancy, consistently in the three cohorts, though not statistically significant in any cohort. A per month increase in breastfeeding duration in Rhea cohort increased the birth weight in index pregnancy by 9.3 gr (b coefficient: 9.3; 95% CI: 2.5, 16.1), while smaller increases were observed in the INMA and HUMIS cohorts. Results will be presented on additional birth outcomes including large for gestational age, birth weight and the difference in birth weight between index and previous pregnancy.

Conclusions: This is the first time that this research hypothesis is being investigated. Results indicate that long duration of breastfeeding may slightly reduce the risk of adverse birth outcomes in subsequent pregnancies, although residual confounding of breastfeeding habits by socioeconomic-status is a challenge and cannot be fully eliminated.